First Named Inventor: Donghang Yan

Application No.: 10/645,642

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AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3 and 6-9 and please cancel claim 12, such that the status of the claims is as follows:

- 1. (Currently Amended) A field effect transistor sandwiched organic semiconductor, comprising: a substrate (1).
 - a gate electrode (2) formed on the surface of the substrate (1),
 - a gate insulation layer (3) formed on the substrate (1) and the gate insulation layer electrode (2),

which is characterized in that, further comprising:

- an active layer (4) formed on the gate insulation layer (3), or meanwhile leaving a part of the gate insulation layer (3) to be exposed,
- a source and drain electrodes (5) formed on a part of the gate insulation layer (3) and a part of the active layer (4),
- an active layer (6) formed on the exposed part of the gate insulation layer (3), the active layer (4), the source electrode and the drain electrode (5).
- 2. (Original) The field effect transistor according to claim 1, wherein the said active layer has holes.
- 3. (Currently Amended) The field effect transistor according to claim 2, wherein the said a semiconductor material is organic semiconductor material or the a hybridized product of organic material and inorganic material.
- 4. (Original) The field effect transistor according to claim 3, wherein the said organic semiconductor material is a solid-state material formed by mixing, eutecting or laminating of two or more kinds of molecular material.

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- 5. (Original) The field effect transistor according to claim 4, wherein the said organic semiconductor material has a carrier mobility of at least 10⁻³cm²/V.s.
- 6. (Currently Amended) The field effect transistor according to claim 1, wherein the said a semiconductor material for the active layer (4) is the same as that for the active layer (6).
- 7. (Currently Amended) The field effect transistor according to claim 1, wherein the said a semiconductor material for the active layer (4) is different from that for the active layer (6).
- 8. (Currently Amended) The field effect transistor according to claim 1, wherein the said a semiconductor material for the active layers (4) and (6) is eutectic.
- 9. (Currently Amended) The field effect transistor according to claim 1, wherein the said active layers (4) and (6) are comprised of at least one selected from a group consisting of CuPc, NiPc, ZnPc, H₂Pc, TiOPc, VOPc, F₁₆CuPc, F₁₆ZnPc and Pentacene, respectively respectively.
- 10. (Original) The field effect transistor according to claim 1, wherein the said active layer(4) is comprised of at least one selected from a group consisting of CuPc, NiPc, ZnPc, H₂Pc, F₁₆CuPc, F₁₆ZnPc and Pentacene, and the said active layer (6) is comprised of at least one selected from a group consisting of twin-Pc metal, H₂Nc, CoNc, CuNc, ZnNc and NiNc.
- 11. (Original) The field effect transistor according to claim 10, wherein the said twin-Pc metal is at least one selected from a group consisting of LaPc₂, CePc₂, PrPc₂, NdPc₂, SmPc₂, EuPc₂, GdPc₂, TbPc₂, DyPc₂, HoPc₂, ErPc₂, TmPc₂, YbPc₂, LuPc₂, YPc₂, ZrPc₂, HfPc₂ and SnPc₂.
- 12. (Canceled)